April 12, 2013

Re: Bay Bridge E2 Connector Rods Investigation

Between March 8 and March 15 of 2013, large steel rods, serving essentially as bolts, broke loose after they had been put under tension during construction of the San Francisco-Oakland Bay Bridge. In all, 32 of 96 such bolts failed. They had been placed on Pier E2, the junction of the Self-Anchored Suspension Span and the Skyway portion on the eastern side of the bridge.

The cause of the breakages is still under active investigation and speculation about causation at this point is premature.

Oversight of this project belongs to the Toll Bridge Project Oversight Committee, created by the Legislature, and comprised of the California Department of Transportation, the Bay Area Toll Authority, and the California Transportation Commission. The collective response to these breakages, and a roadmap for investigation and resolution of this problem, is outlined in a memorandum by the director of Caltrans, dated March 29, 2013, and titled "Bay Bridge E2 Connector Rods." That memorandum lays out a 10-step process to investigate the cause while seeking a solution.

One of the first steps called for in this investigation, is an examination of the documentation of testing conducted during manufacture. Those documents, like the bridge itself, belong to the People of California, and are being made available here.

There are two sets of chronological documents because there are two separate sets of rods. The first set of documents deals with the 96 bolts obtained in 2008, beginning with a series of pre-production inspections of the manufacturing facilities and continuing with the process of manufacture. The second set deals with a batch of 192 rods, fabricated to meet the same specifications, but which were manufactured two years later, in 2010. As was the case with the batch of 96, these documents detail pre-manufacturing inspection of the facilities, delivery of the raw steel, heat treating, threading, and galvanization.

These records are among the tools used by the members of the Toll Bridge Project Oversight Committee; the bridge builder American Bridge Flour; and the bridge designer, TY Lin, to determine the cause of the failures. While information contained in these reports may prove useful in the forensic analysis of the breakages, it should not be considered exhaustive, as post-breakage testing and further analyses are underway. Meanwhile, Caltrans will continue to aggressively seek an engineering solution so that the San Francisco-Oakland Bay Bridge will deliver the same level of seismic safety for which it was designed.